National Aeronautics and Space Administration

LAGNIAPPE

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Goldin to resign as Agency administrator

After nearly 10 years as the head of America's space program, NASA's ninth and longest-serving Administrator, Daniel Goldin, will step down Nov. 17.

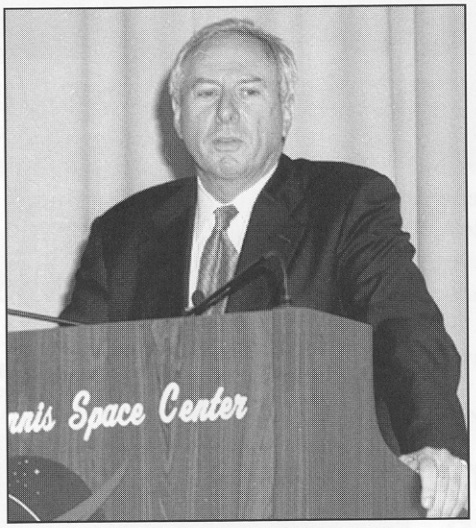
"For nearly a decade, it has been my honor to serve the American people by leading our nation's space program and its dedicated personnel," Goldin said in a letter to President George W. Bush.

Goldin, 61, was appointed NASA Administrator on April 1, 1992, by then-President George H.W. Bush.

"The magnitude of Dan Goldin's contributions is immense," Stennis Space Center Acting Director Mark Craig said. "Among them, he will be remembered for helping us learn that we can do more with less, for his management reforms to keep NASA in ce with the changing world, and as an ardent champion of safety."

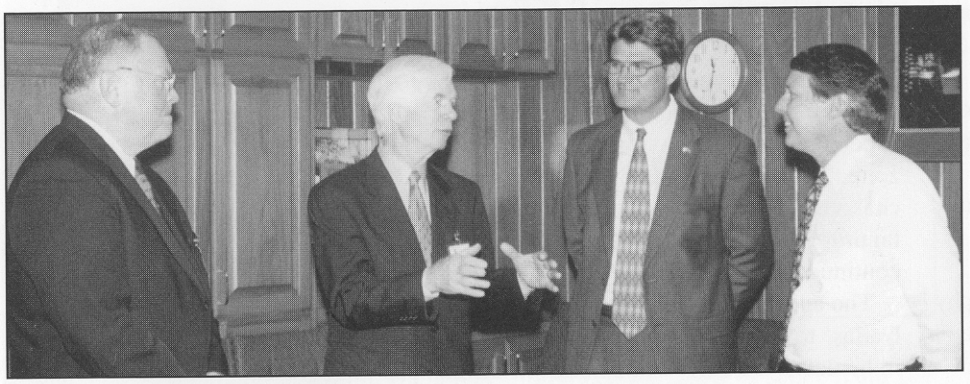
Craig said Goldin challenged Stennis Space Center to become state-of-the-art and world-class in rocket propulsion testing. He also firmly supported the center's lead role in Earth science applications.

"Mr. Goldin also challenged Mississippi to become the nation's leader in commercial remote sensing product development and services," Craig said. "That challenge



NASA Administrator Daniel Goldin

resulted in the Mississippi Space Commerce Initiative that today attracts high-tech businesses to our state to take advantage of Stennis' unique capability and environment, of a corporate cluster, of state university research, and of a work force trained in remote sensing. We wish our Administrator Godspeed in his future endeavors and thank him for his leadership of our Agency and continued support of Stennis Space Center and its programs."



U.S. Sen. Thad Cochran, the senior senator from Mississippi, visited Stennis Space Center on Oct. 22. From left, Stennis Acting Director Mark Craig listens as Cochran shares his perspectives with Center Operations and Support Directorate Director William Parsons and Earth Science Applications Directorate Acting Director Michael Thomas. While on site, Cochran also met with Rear. Adm. Thomas Q. Donaldson V, Commander, Naval Meteorology and Oceanography Command (CNMOC), and Dr. Don L. Durham, CNMOC technical/deputy director.

NASA helps North Carolina map zones of potential flooding

NASA scientists have teamed with researchers in North Carolina in an effort to get relief for the people who find themselves under siege by floodwaters like those spawned by strong Atlantic hurricanes.

The storms bring high winds, storm surges and heavy rains, and the resulting floods force massive evacuations, threatening the lives of thousands of residents.

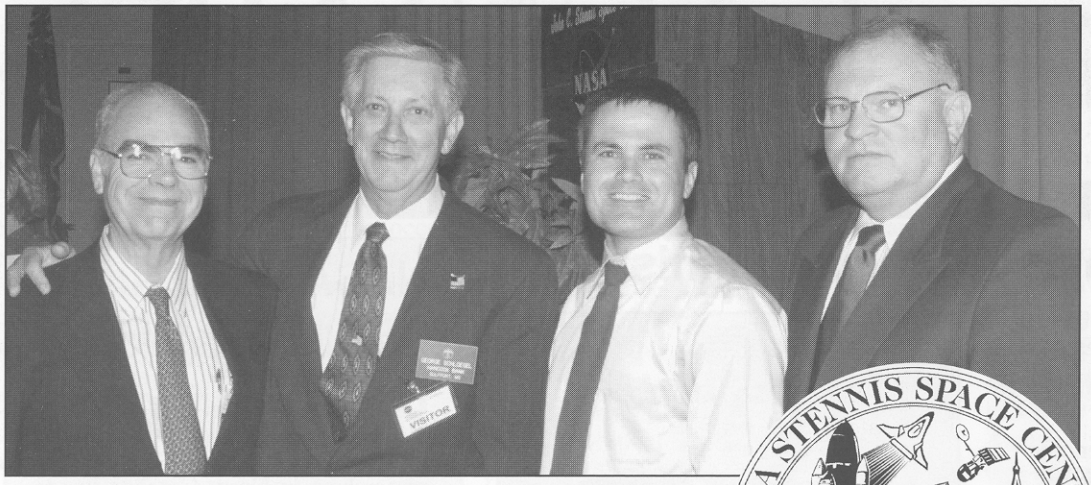
Using instruments on satellites and airplanes, NASA provides data used to create highly accurate maps of suspected flood zones that can help the state's emergency management services better prepare for future storms.

In 1999, back-to-back impacts from Hurricanes Dennis and Floyd wreaked havoc on North Carolina's eastern coastal plain. Over a nine-day period, Hurricane Dennis ravaged North Carolina with torrential rains and 70 mph winds. Ten days later, Hurricane Floyd, twice the size of typical Atlantic hurricanes, made landfall, dumping 18 inches of rain in the same geographical areas.

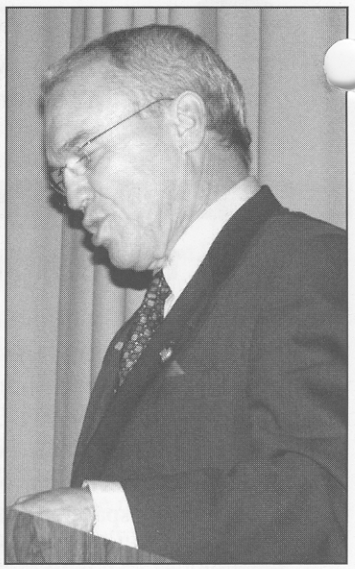
Combined, the two hurricanes claimed 51 lives and caused more than $6 billion in damages.

Soon afterward, state officials turned to scientists at Stennis Space Center. "Initially, the state of North Carolina asked NASA for technical assistance in coordinating contacts with other federal agencies in obtaining remote sensing data, digital photographs taken from an airplane or satellite, for flood mapping," said Dr. Ghassem Asrar, associate administrator

See **MAPPING**, Page 8



Local civic leaders met with Mississippi actor David Dallas following his performance Oct. 25. From left, Rod Hartung, a founding member of the non-profit foundation spearheading efforts to develop a major visitor attraction; George Schloegel, president and CEO of Hancock Bank; Dallas; and Stennis Space Center Acting Director Mark Craig.



Dr. Don Durham

Original play honors contributions of Sen. Stennis to state, nation

In celebration of Stennis Space Center's 40th anniversary on Oct. 25, community leaders, area students, members of the media and Stennis Space Center employees were treated to an entertaining and moving tribute to the center's namesake, Sen. John C. Stennis.

In morning and afternoon programs, actor David Dallas from Cleveland, Miss., performed an original, one-man play, "A Gentleman from Mississippi," in which he shared his experiences living with and caring for the aging senator.

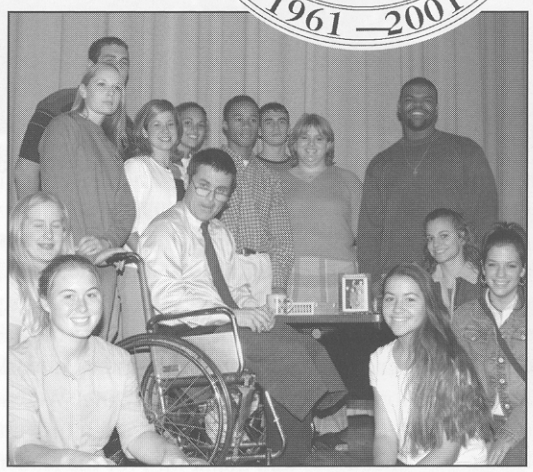
After a special video message from U.S. Sen. Thad Cochran, Acting Center Director Mark Craig opened each program with comments on the history of Stennis Space Center and the roles of Sen. Stennis and Dr. Wernher Von Braun, whose visions laid the groundwork for what is now NASA's lead center for propulsion testing.

The tribute included remarks from Hancock Bank President and CEO George Schloegel and Dr. Donald L. Durham, technical/deputy director, Commander, Naval Meteorology and Oceanography Command, each of whom shared personal insight into the establishment of the Navy's presence at Stennis.

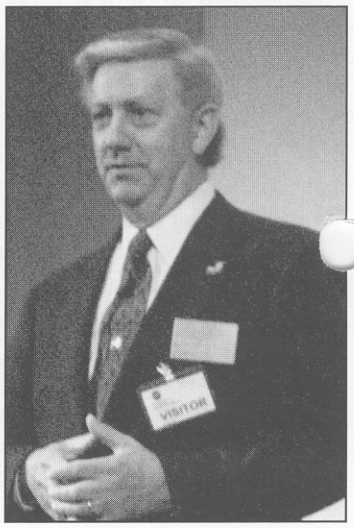
The men's stories awed the audience, who learned of the importance of having the U.S. Navy at Stennis and of the political balance delicately and diplomatically reached to locate this center in Hancock County.

Schloegel explained how in its early years, the facility gained three things it needed to achieve the success for which it is lauded today: the presence of the Admiral at Stennis, the Navy's supercomputer and the vast 125,000-acre buffer zone that surrounds Stennis Space Center. He charged those present with the duty of maintaining the buffer zone to ensure the center's continued success.

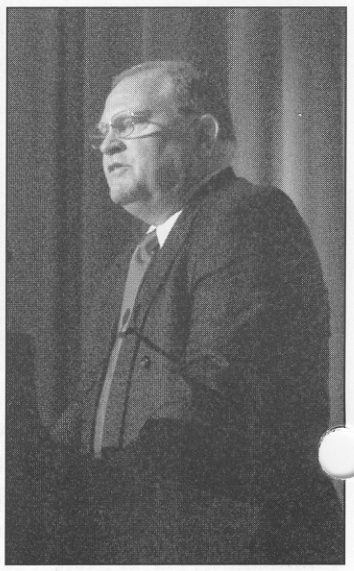
The audience also laughed and cried with Dallas' touching portrayal of Sen. Stennis, who in his later years lived in a home on the campus of his alma mater, Mississippi State University, where he was cared for by then-graduate students Dallas and a classmate. Through his play, Dallas gave the audience a personal glimpse into Sen. Stennis' last years, through which, even in failing health, he maintained dignity, character and wit.



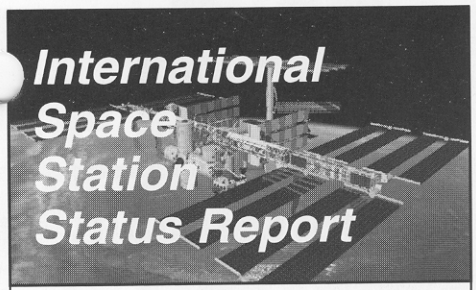
Drama students from Picayune High School chat with David Dallas following his one-man play, 'A Gentleman from Mississippi.'



George Schloegel



Mark Craig



The International Space Station marked a milestone in space history this month — one full year of continuous international human presence in orbit. It's a year that has seen the space platform become the largest, most sophisticated and most powerful spacecraft ever built.

The International Space Station has grown from a 70-ton, efficiency apartment-sized foothold in orbit to a space laboratory of unprecedented capability. The station is now a 150-ton orbiting complex with more volume than a three-bedroom house.

Space fliers, including men and women representing six nations, have made a total of 79 visits to the station thus far. Almost 50,000 hours of station operations and scientific experiments have been conducted, with investigations controlled by astronauts in space and remotely by scientists on the ground.

STS-108

Space Shuttle Endeavour

Launch: No earlier than Nov. 29.
Mission: Deliver the Expedition Four Crew and the Italian Multi-Purpose Logistics Module, Raffaello, which first flew on STS-100 in April, to the International Space Station.

Crew: Dominic Gorie will command STS-108, and Mark Kelly will serve as pilot. Astronauts Linda Godwin and Daniel Tani are mission specialists for STS-108.

Director's Dialogue

from Mark Craig, Acting Director

The NASA Strategic Resources Review

For the past several months, you may have been hearing about the Agency's Strategic Resources Review, or SRR. Many of you have assisted in preparing Stennis Space Center's input for this initiative. But, what is the SRR?

The SRR is an across-the-board examination of NASA, its mission, its structure, its programs and the way we do business, with a view to identifying efficiencies, maximizing the impact of constrained resources, and effectively responding to the President's guidelines for management improvements, strategic outsourcing and program directives.

So far, the SRR has identified 139 actions for implementation across the Agency to reduce costs, enhance effectiveness and increase productivity. These actions are now being reviewed by the NASA Advisory Council, with special emphasis being placed on overall Agency roles, mission and vision; creative management and organizations; work force and facilities; shuttle privatization; and the International Space Station. The recently released Young report on the International Space Station is the first review that has been completed.

Actions specific to Stennis Space Center will not detract but will enhance and solidify our propulsion test and remote sensing applications assignments. The Agency recognizes our value as the manager of a multiagency center and has used the Stennis model as an example of how government should operate.

Although there are some significant challenges facing the Agency in the next few years, the future of Stennis Space Center remains robust. I look forward to sharing additional SRR information with you in the coming months, beginning with an all-hands session that will be announced.

Mark Craig

Test teams at Stennis Space Center's E Complex successfully completed the first phase in an important test series for the Integrated Powerhead Demonstrator (IPD) Liquid Oxygen Turbopump. The IPD program is developing new technologies for NASA's second generation propulsion systems.

A Day in the Life of . . SSME

A Space Shuttle Main Eng

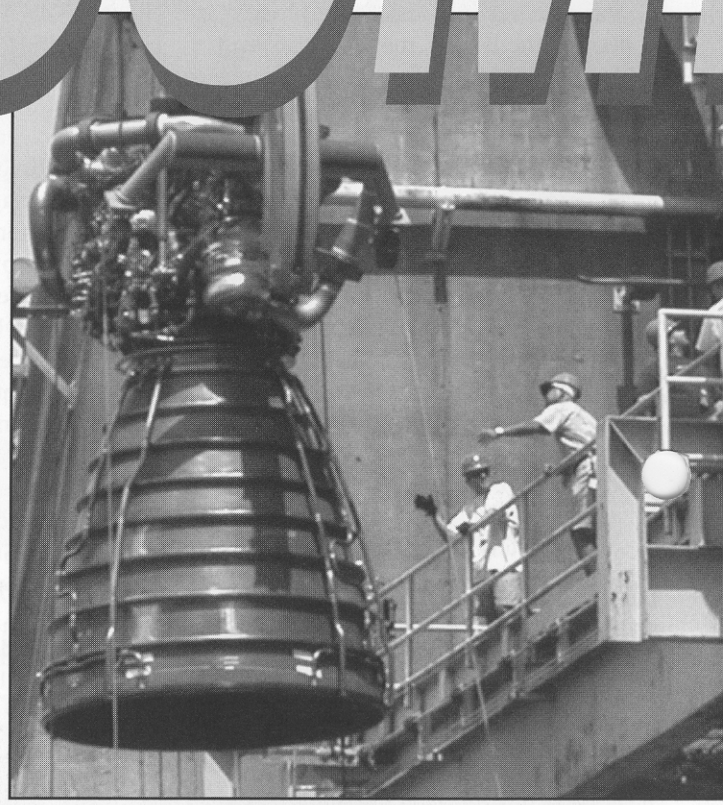
Space Shuttle Main Engine (SSME) demonstrator 0526 left the Engine Processing Building 3202 at Stennis Space Center on Sept. 4 to take the next step in its 15-test series to flight certify various engine assets. Crews from The Boeing Co., completing a series of weeklong "green runs," were now ready to install the engine on the A-2 test stand.

"This demonstrator engine will be on the test stand from now until the end of December," NASA's Pat Mooney, Space Shuttle Main Engine (SSME) project manager at Stennis, said. "We expect to flight certify four units of the Pratt and Whitney high-pressure fuel turbopumps during that time."

The A-2 test stand is one of two single-engine test stands in the A Complex at Stennis. Each stand can test a variety of engines and test articles. Both extend 50 feet into the ground and can handle engines that generate up to 1.1 million pounds of thrust. The A-2 is a high-altitude test stand. Diffusers connected to an engine's nozzle simulate engine performances at altitudes from 54,000 to 70,000 feet.

A-2 is the everyday work center for some 40 people. Each task and each function of the on-stand working crew in the test stand is focused on the successful completion of a test. Everyone from the administrators to the maintenance staff determine what they do around the test schedule. The test crew, led by the test conductor, usually numbers two dozen technicians tasked with varying duties.

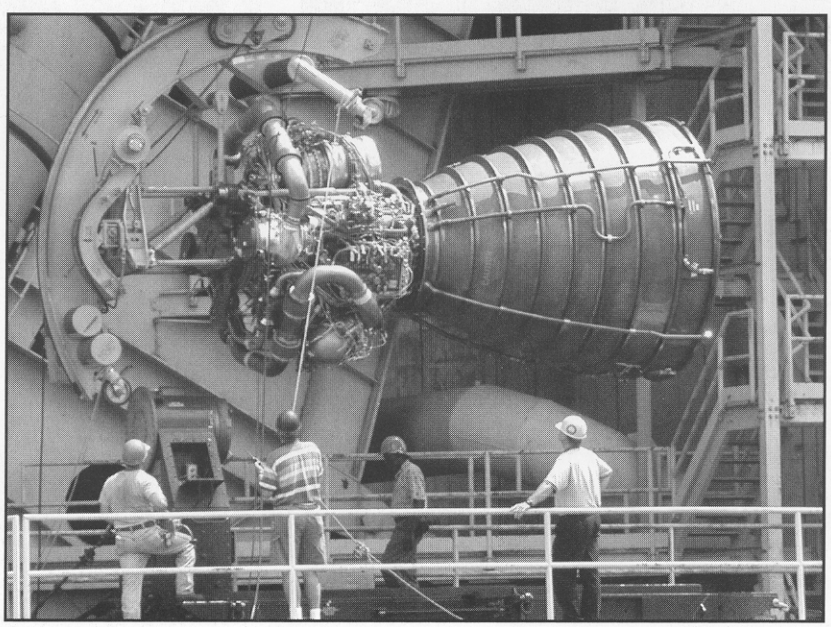
On the day of a test — at T minus six hours — the initial portion of the test countdown process begins. The stand crew completes the last steps in positioning the test stand valves, pneumatic panels, instrumentation set-ups for test data acquisition and surveillance cameras in proper configuration for the upcoming test. The test conductor takes position in the Test Control Center (TCC) to begin the initial set-up.



At the two-hour mark, the test conductor flows the liquid propellant to the engine. Members of the TCC team are assigned to monitor the hydrogen detection system. The final preparations for the engine test are begun at the one-hour mark. Critical facility test support systems are positioned in their "test-ready" states.

The test conductor, at six-minutes prior to the test, signals engineers to proceed into the engine start sequence. And then, for eight and one-half minutes, the dependable, steady drone of an SSME drums out the sounds of its power.

"The testing process is very strict business," Boeing's Site Director Dave Geiger said. "But each test is an exciting, impressive event."



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▶ **Boeing's Phil technician, mon instrumentation**

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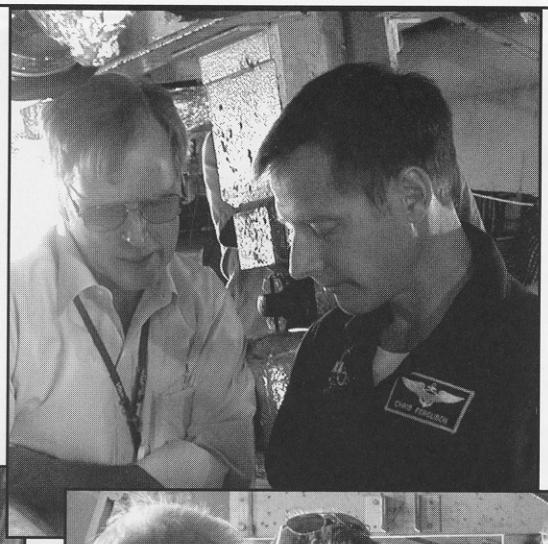
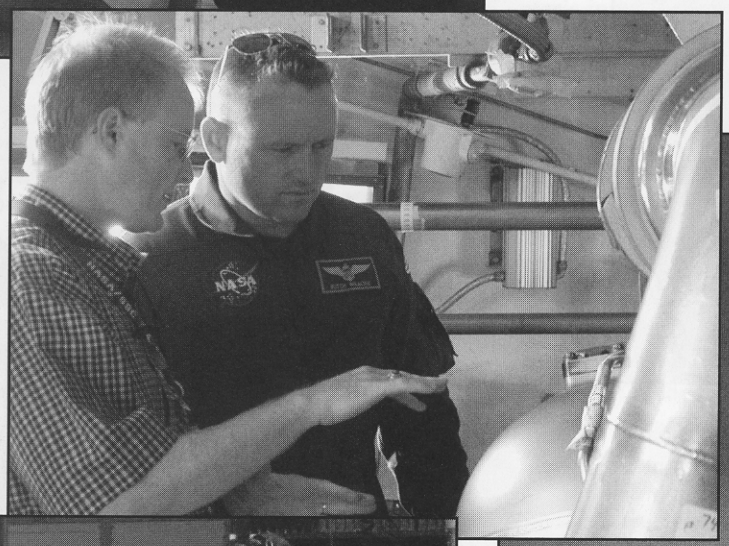
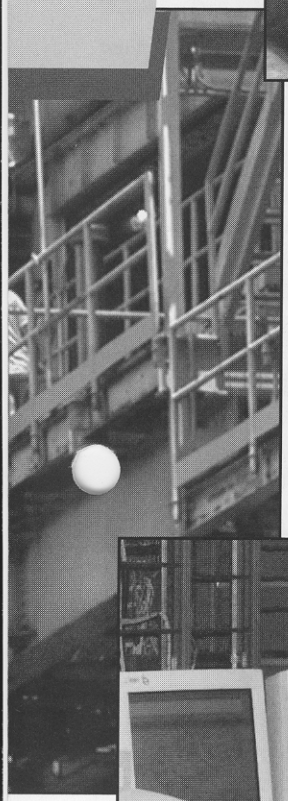
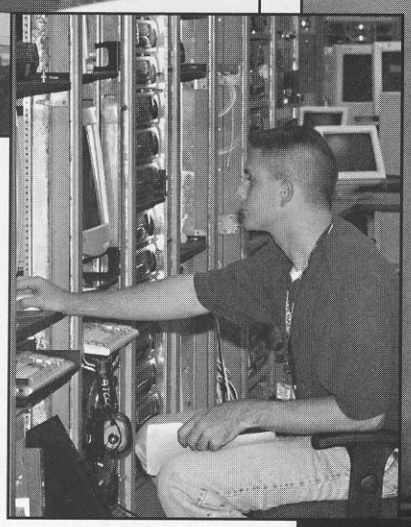


◀ SSME Project Manager Pat Mooney of Stennis, left, talks with NASA astronaut, Cmdr. Chris Ferguson. Ferguson, assigned to the Astronaut Office Spacecraft Systems Operations Branch involving the Space Shuttle Main Engine, External Tank, Solid Rocket Boosters and Space Shuttle Software, along with Lt. Cmdr. Barry "Butch" Wilmore toured the A-2 test stand and support services at Stennis in September.



▼ NASA's Keith Brock, left, and astronaut Lt. Cmdr. Wilmore talk about the improvements the Pratt and Whitney turbo-pump offers the SSME in the Block II configuration.





▼ The full Moon's brightness is lost behind the exhaust of a successful test of the SSME 0526 on Oct. 31.

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Boeing Company unload SSME 0526
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"Ross" Watkins, an instrumentation
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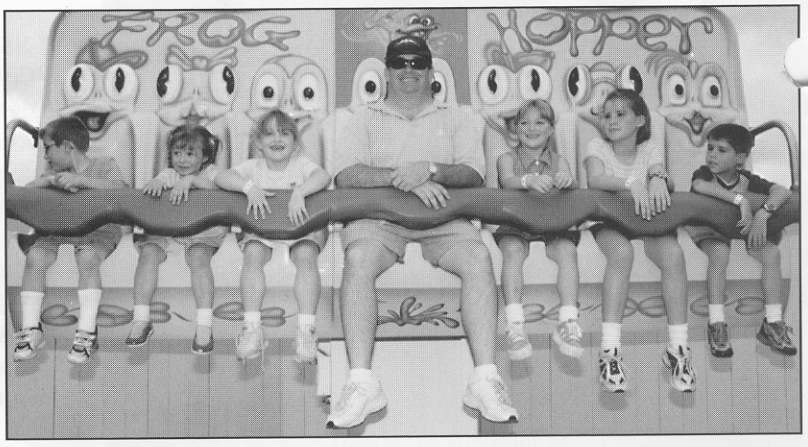
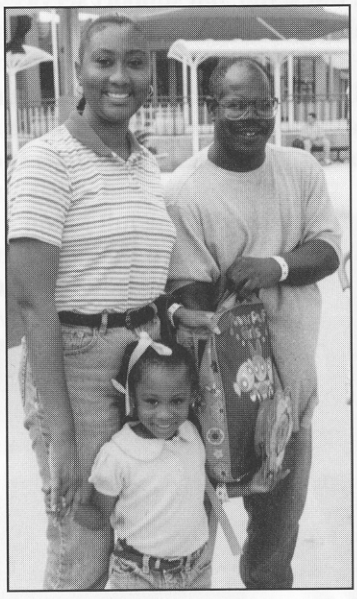
NASA Picnic

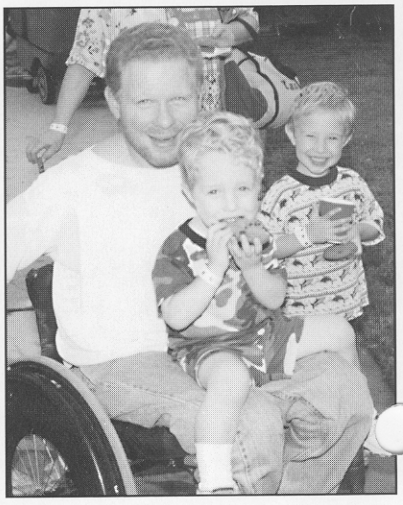
Family Fun





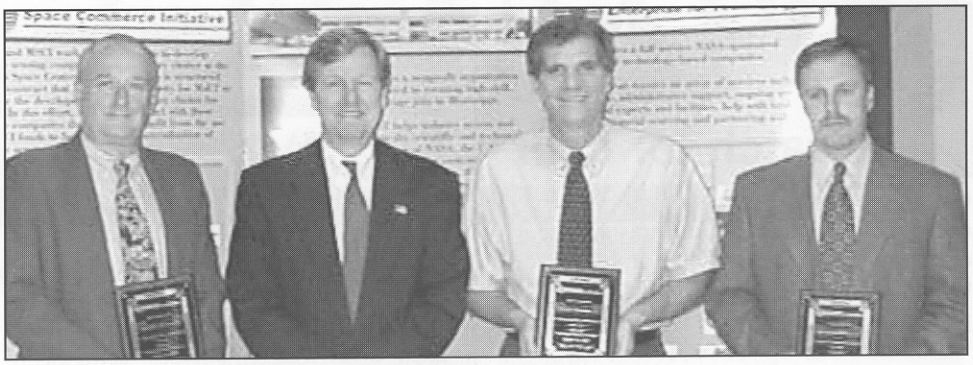
Despite dark clouds looming in the background, more than 2,350 Stennis employees, family and friends attended the annual Fall Mission Picnic at Jazzland Theme Park in New Orleans on Oct. 13.

Volunteers who helped coordinate the event included NASA's Charlene Guin, Sandra Wescovich, Rob Harris, Jason Edge, Tony Goretski, Bo Clarke, and Mary Byrd; Boeing's Ray Alfred; Mississippi Space Services' Denise Dedeaux; Lockheed Martin's Bertha Jackson; OAO's Juliet Wade and Omni-Cube's Marty Bounds. (Photographs, clockwise, include NASA's Cabrina Bell, daughter, Cabrein, and husband, Melvin Bell. NASA's Bryon Maynard takes a frog hop upwards with some smiling young companions. Mississippi Space Services' David Thomas and sons, Zane and Zack, make their way from the "eats" line. NASA's Denise Maynard and son, Cameron, slip and slide through the afternoon.



NASA employees hired between Oct. 1, 2000, and Sept. 30, 2001, were recently honored with a reception in the atrium of Bldg. 1100. New employees pictured include (listed alphabetically) James Barnett, Michele Beisler, Daniel Brady, Cynthia Bright, William Camus, David Carstens, Susan Cleaves, Charles Fallo, Robert Field, Jared Grover, Olivia Hobgood, Teri Jackson, Carolyn Kennedy, Casey Kirchner, Nathan LaBorde, Gregory Mayeaux, James Moore, Christopher Mulkey, William Parsons, Rena Perwien, David Roberts, Ryan Roberts, Cecile Saltzman, Karen Seals, Joy Smith, Karma Snyder, Ashley Speed, Dwayne Stockstill, Batrina Street, Lladro Sylvester, Peter Tran and Roy Worthy. Not pictured, Craig Chandler, David Coote, Mark Glorioso, Robert Harris, Melissa Huggins, Bridget Jones, David Keith, Richard Kelly, Sarah Luster, Delma Moore, Michael Nichols, Amy Rice, Robert Ross, Michael Smiles, Kendrick Smith and Kathy Spainhower.

Stennis incubator program graduates resident companies



The Mississippi Enterprise for Technology (MsET) incubator program recently celebrated the graduation of three resident client companies. The companies are Complete Environmental and Remediation Co. LLC, Neptune Sciences Inc. and ProVision Technologies. Participating in the ceremony, from left, are Neptune Sciences' John Buntz, MsET Chief Executive Officer Greg Hinkebein, ProVision's George May and Complete Environmental and Remediation Co.'s Eddie Blossman.

The Mississippi Enterprise for Technology (MsET) incubator program celebrated the graduation of three resident client companies Oct. 10. Complete Environmental and Remediation Co. LLC, Neptune Sciences Inc. and ProVision Technologies each outgrew program support by reaching graduation benchmarks.

The mission of the enterprise is to create, retain and attract high-skill, high-wage jobs in Mississippi through the commercialization of state and federal technologies.

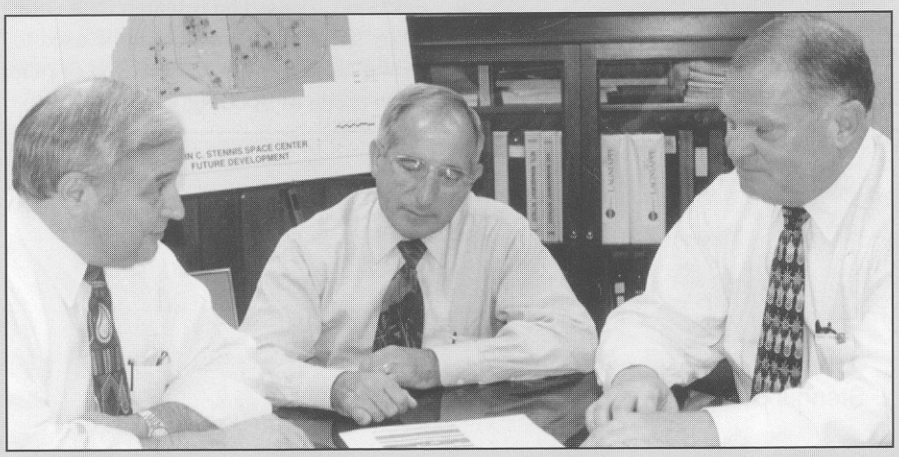
"To a large extent, the enterprise accomplishes its mission through assisting with the growth and development of young, technology-based companies in its small business incubator program," MsET Chief Executive Officer Greg Hinkebein said. "We provide a nurturing environment for resident client companies. They are provided with crucial business and technology-related services, opportunities for joint ventures, entrepreneur training and access to state and federal technology portfolios."

Statistics show that roughly 80 percent of all small businesses fail within the first three to five years. The reverse is true of small businesses that establish a foothold in small business incubators. Incubators reduce the overhead associated with running a business and provide essential support services — affordable space, common facilities and equipment, entrepreneur-in-residence training and customized services packages — that would otherwise be very costly or unavailable.

"The program at Stennis is uniquely positioned to support technology-based start-up companies," Hinkebein said. "The primary distinction between MsET and other small business incubators is our access to the vast repositories of technology throughout the state."

NASA's partnership with Mississippi is administered by Stennis' Office of Technology Transfer. The manager of the office, Kirk Sharp, believes that "the true value of the federal/state partnership converges in the MsET where technology know-how, business smarts, and a network of strategic support partners all underpin the success of a start-up operation. MsET is successful because they provide the right help at the right time, guided by the companies' needs."

The enterprise is a joint effort of the Mississippi Department of Economic and Community Development, NASA and the state's universities.



Joseph Rothenberg, center, associate administrator for space flight at NASA Headquarters in Washington, D.C., has announced his plans to retire from the Agency on Dec. 15. Rothenberg, who joined NASA in 1983, has worked closely with the leadership at Stennis Space Center and has supported the center's evolving role as an Agency leader in rocket propulsion testing and Earth science applications. This photo, taken in September 1999, with Stennis Director Roy Estess, left, and Deputy Director Mark Craig, marked one of Rothenberg's many trips to Stennis.

Stennis' energy plan given Presidential award in Washington

Stennis Space Center received a Presidential Award for Leadership in Federal Energy Management on Oct. 18 in a ceremony in Washington, D.C. Stennis was recognized for its commitment to having energy-efficient buildings that lower energy demand, reduce air-pollution and provide quality indoor environments. Building 1020, the Naval Meteorology and Oceanography administration facility, was selected to receive the prestigious award. Vice President Dick Cheney presented the award to the 18-member NASA team including Eric Ross, AST, Experimental Facilities Development at Stennis.

Stennis has also received the Environmental Protection Agency's Energy Star Label for Buildings — the Mark of Excellence in Energy Performance, for its energy management of Building 1020.

Safety Corner

'Tis the season to watch for deer

Oh, Deer! Stennis Security records indicate at least 25 deer-vehicle crashes occur each year. The highest risk months are October through February, with another peak in the spring when young, tender vegetation is abundant.

Vigilance is the best way to avoid deer-vehicle crashes. In daylight hours, the watchful motorist can often see a deer at the side of the road, or on the road, soon enough to avoid a collision. In darkness or near-darkness, however, motorists frequently do not see an animal until it is too close to avoid.

Here are a few tips to follow in avoiding deer-vehicle crashes:

- If you see one deer on or near a roadway, expect that others may follow. Slow down and be alert.
- After dark, use high beams when there is no oncoming traffic. The high beams will provide better visibility and allow for greater reaction time. However, be advised that bright lights tend to immobilize deer. Honk your horn in an effort to get the deer to move off the road.
- Always wear a seat belt, as required by state law, and drive at a safe, sensible speed to prevent such collisions.
- Report any deer-vehicle collisions to Stennis Security, a local law enforcement agency or a state wildlife officer and your insurance agent/company within 24 hours. At Stennis, deer-vehicle collisions should be immediately reported to Security (911).

QUICK LOOK

■ **The NASA Exchange will host the 2001 NASA Fall Barbecue** beginning at 4 p.m. Friday, Nov. 16, at the Cypress House Pavilion. Tickets are $3 in advance and $4 at the door. Children under 12 eat free with a ticket marked "child." The barbecue is open to NASA employees, retirees, their families and guests. For information contact Bo Clarke at Ext. 8-1645, or Jon Roth at Ext. 8-2123.

■ **Speakeasy Toastmasters at Stennis** welcomes anyone interested in improving his or her communication skills in a fun, supportive environment. The club meets the first and third Thursday of each month from 11:30 a.m. to 12:30 p.m. in the NASA conference center. For information, contact Leigh Schaumburg at Ext. 8-5165.

■ **The following will be closed Thursday, Nov. 22, in observance of Thanksgiving:** Keesler Federal Credit Union, Stennis Child Care Development Center, APG Service Station, Dave's Snack Bar, Main Cafeteria, U.S. Post Office, World Wide Travel, Hancock Bank, The Wellness Center, Corporate Cleaners, MSS-InDyne mail services and taxi service, the barber shop and communications. The Stennis Child Care Development Center will remain closed Friday, Nov. 23.

MAPPING . . .

(Continued from Page 1)

for Earth Science at NASA Headquarters in Washington, D.C.

"North Carolina was already one of the most sophisticated states in the U.S. in the use of geographic information," said Dr. Bruce Davis, a geographer and acting chief of the application research division of NASA's Earth Science Applications Directorate at Stennis. "The state, through its Center for Geographic Information and Analysis, was well prepared to take advantage of remote sensing data.

"We assisted in the review of North Carolina's quality control plan for the development of digital elevation-model products. We also engaged in pilot projects that gave the state an initial look at the quality and utility of remotely sensed data to be used for the development of improved digital elevation models."

"With this statewide digital elevation model, we are looking at informed methods of assessing the impact to be felt by communities as they grow and develop," John Dorman, North Carolina administrator for survey and mapping, said. "The accuracy of the elevation data will greatly assist in mapping areas that might potentially become flooded in the future."

North Carolina officials believe the work with NASA holds great promise for future development and mapping of potential flood zones. The research data collected by the Stennis team could be used to model almost any coastal region or other areas prone to flooding.

LAGNIAPPE

Lagniappe is published monthly by the John C. Stennis Space Center, National Aeronautics and Space Administration. Mark Craig is the acting director, Myron Webb is the public affairs officer, and Lanee Cooksey is the news chief. Comments and suggestions should be forwarded to the Lagniappe Office, Building 1200, Room 208D, Stennis Space Center, MS 39529, or call (228) 688-3585.

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